

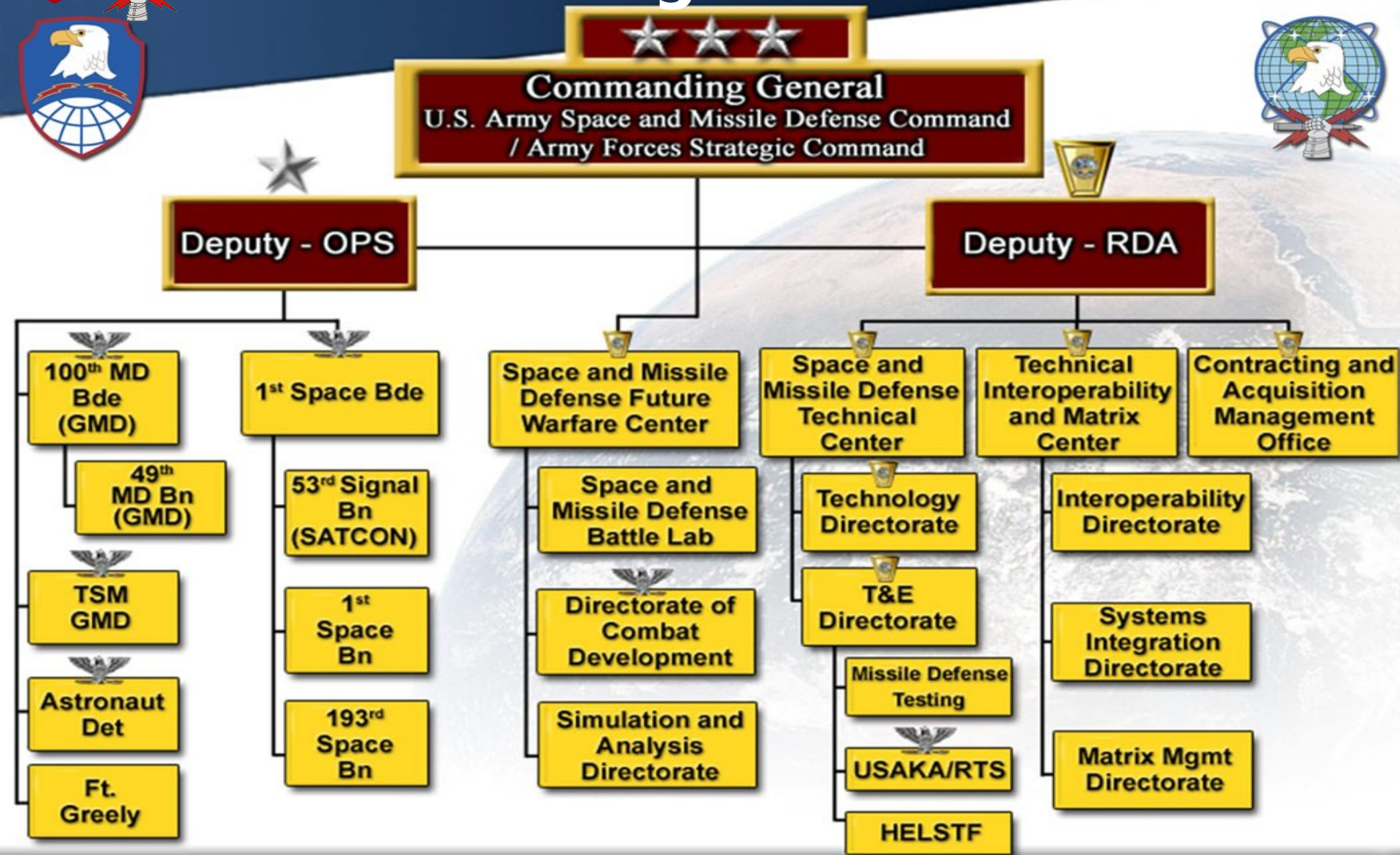
U.S. Army Space and Missile Defense Command / U.S. Army Forces Strategic Command

Integrated Test & Analysis Contract (ITAC)

19 July 2006

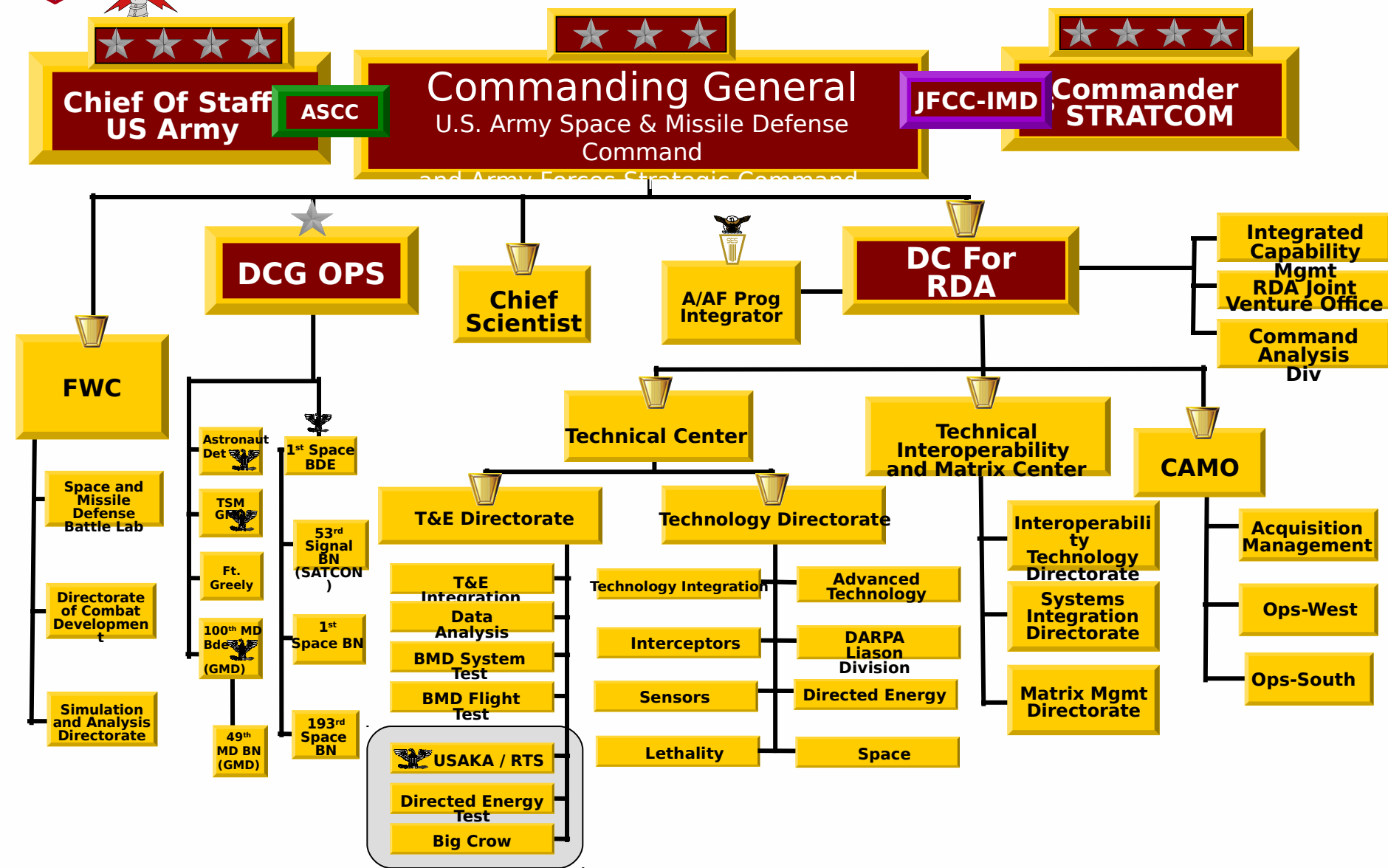
**Mr. Michael Cantrell
Director,
Integrated Capabilities Manager**

USASMDC / ARSTRAT Organization





Organizational Relationship





RDA Integrated Capabilities Management Directorate



**Mr. M.
Cantrell**



RDA Integrated Capabilities Management Directorate

MISSION

Provide the Missile Defense Agency and the US Army with Advanced Digital Hardware in the loop Modeling and Simulation Tools to evaluate interoperability and the BMDS performance; support the MDA BMDS Operational Configuration Control Board; and develop/manage advanced research and development programs in support of MDA and the warfighter

OBJECTIVE

Use MDSE Hardware in the loop Tools to support MDA CTF BMDS Block performance testing; Validate open systems framework that externally drives all BMDS block elements using dynamic and consistent threat state data; Augment MDSE HWIL using digital simulations; Chair the MDA Operational Configuration Control Board Change Assessment Group.



National Missile Defense

THE NATIONAL MISSILE DEFENSE ACT OF 1999

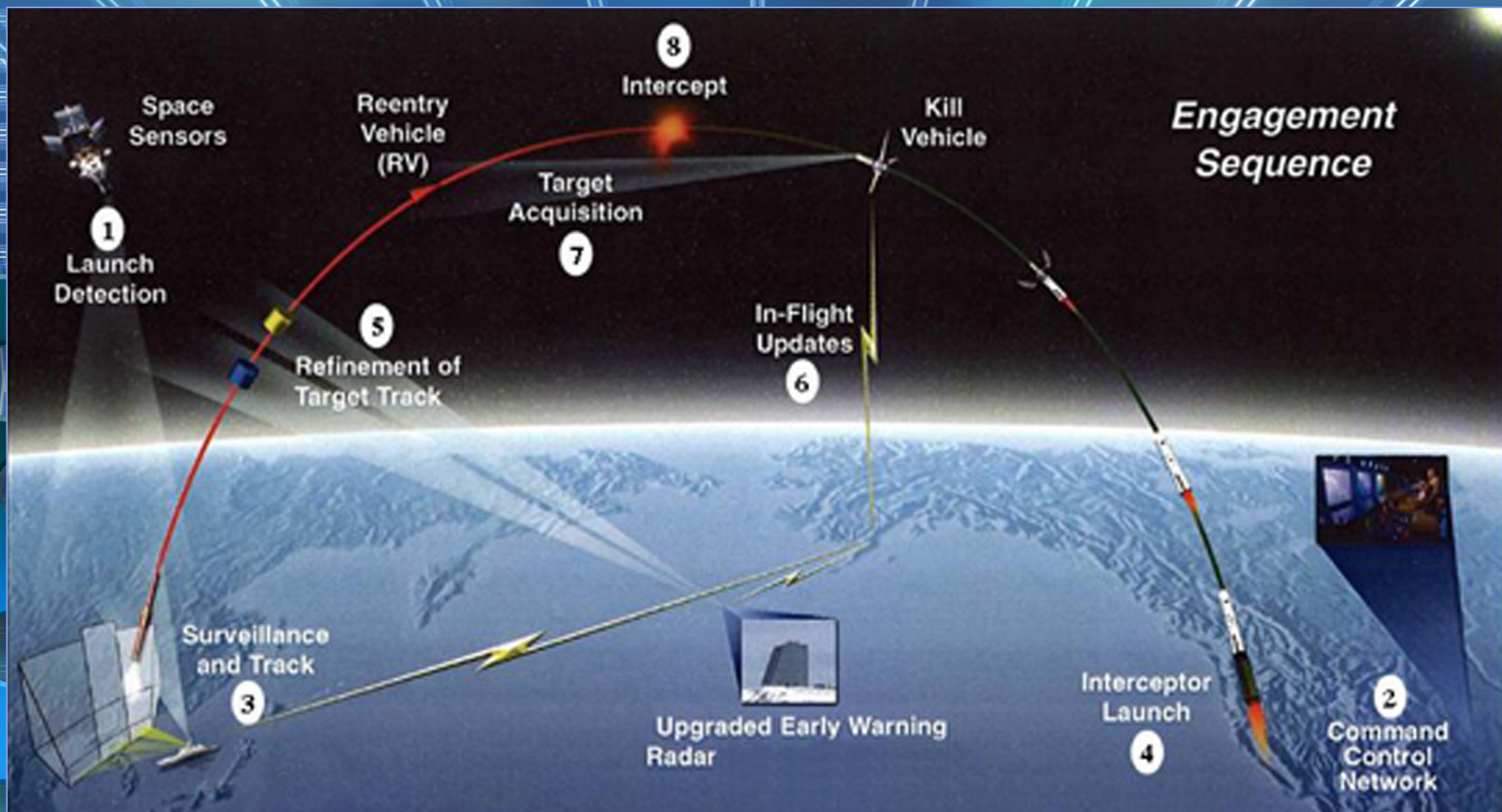
"It is the policy of the United States to deploy as soon as is technologically possible an effective National Missile Defense system capable of defending the territory of the United States against limited ballistic missile attack (whether accidental, unauthorized, or deliberate) with funding subject to the annual authorization of appropriations and the annual appropriation of funds for National Missile Defense."

— SEC. 2 H.R. 4





Example Engagement Sequence





Modeling and Simulation Organization

Modeling and Simulation

Director
Asst. Director
Chief for Program Control

Simulation, Architecture
& Engineering

Verification, Validation
& Accreditation

International
Implementation

Modeling and Simulation Center of Excellence

HWIL

Lethality

V & V

Phenomenology

Test Resources

HWIL Hardware

Facility Upgrades

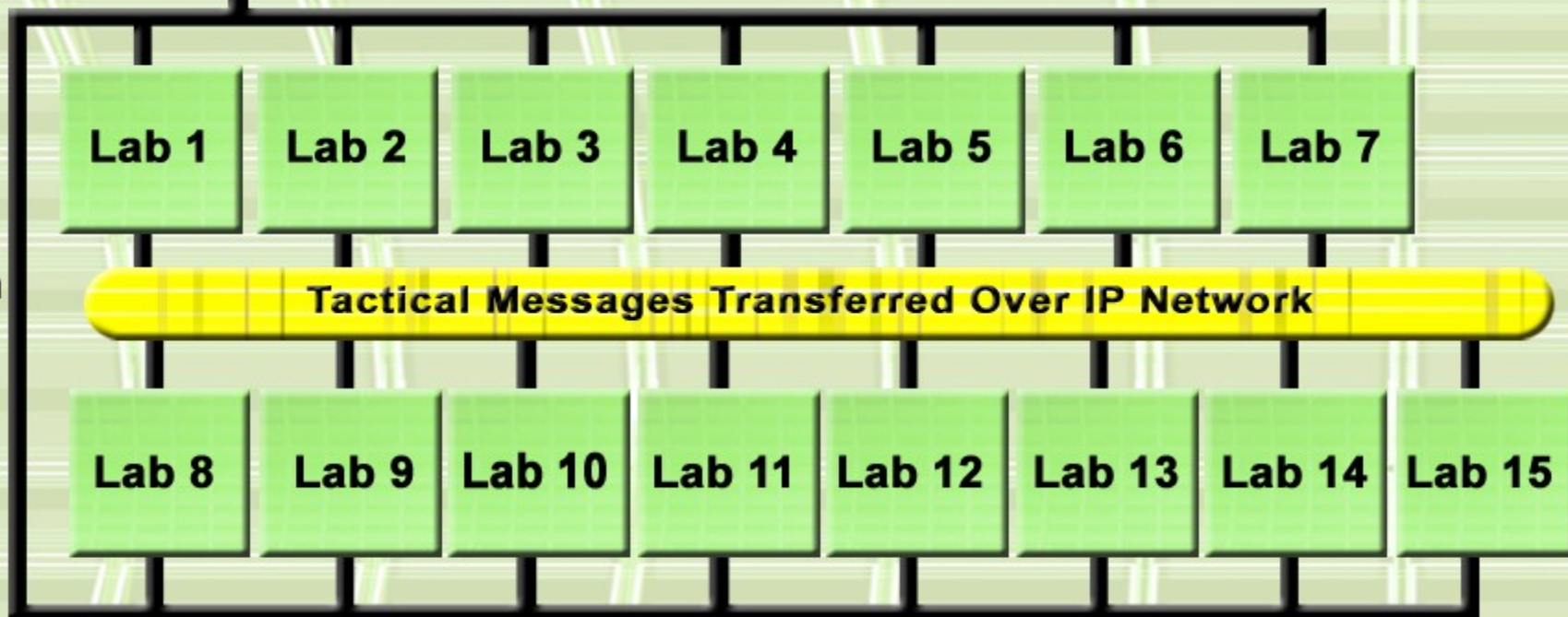


MDSE Spiral 6.0 Architecture



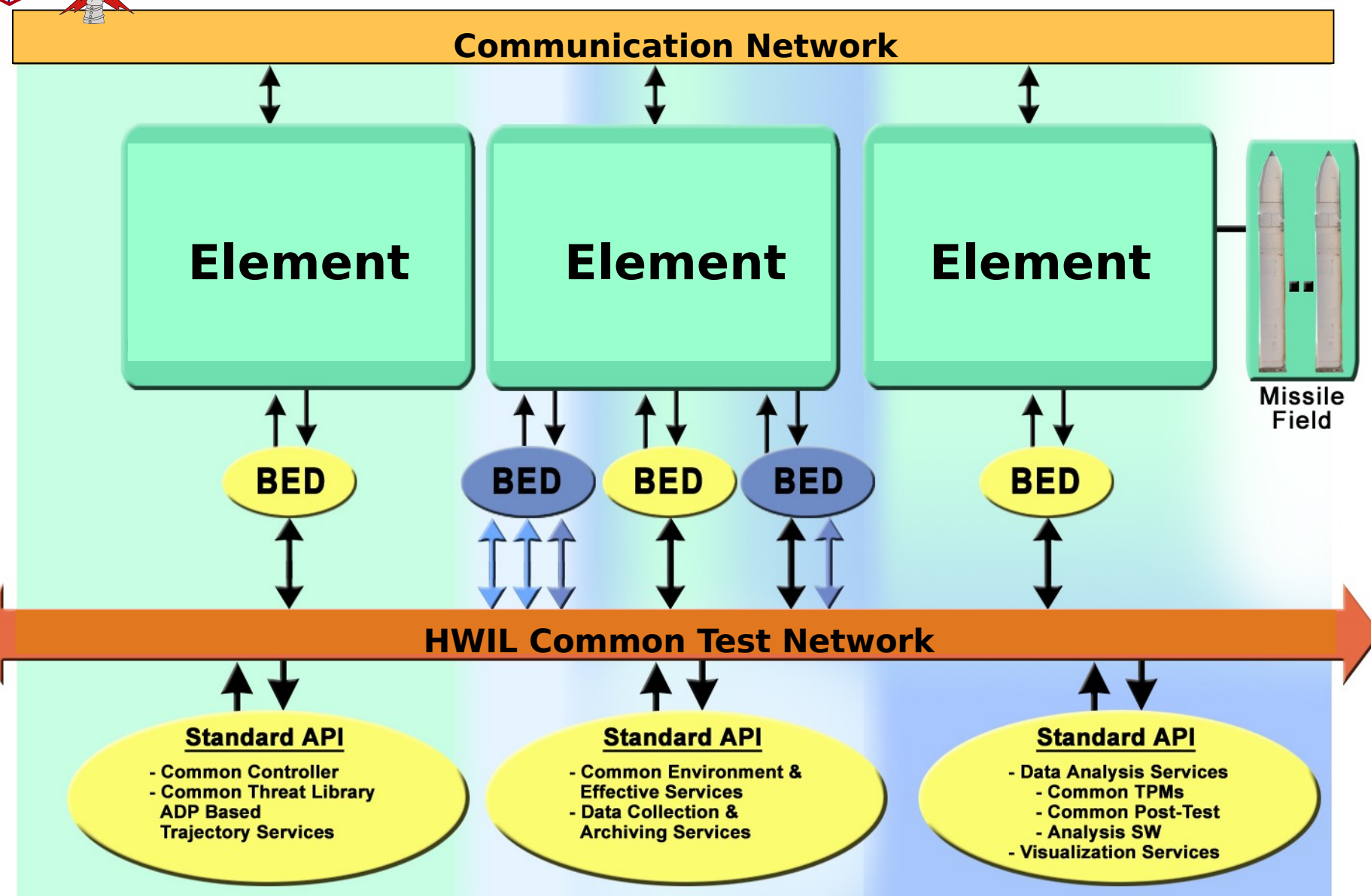
**Missile Defense System Exerciser (MDSE)
Test Control Segmnets (TCS)
Located in Huntsville and at Joint National
Integration Center (JNIC)**

**MDSE
Drives
Common
Threat
State
Vectors**





Objective HWIL Approach





CTO and GT Architecture Vision

**Operational
Communication
Network**



**CTO
Assets**



**Data
Record
& Inject**



**Truth
Communication
Network**

**Truth
Data**

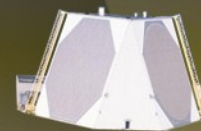
**HWIL
Communication
Network**



**GT
Assets**



**Data
Record
& Inject**

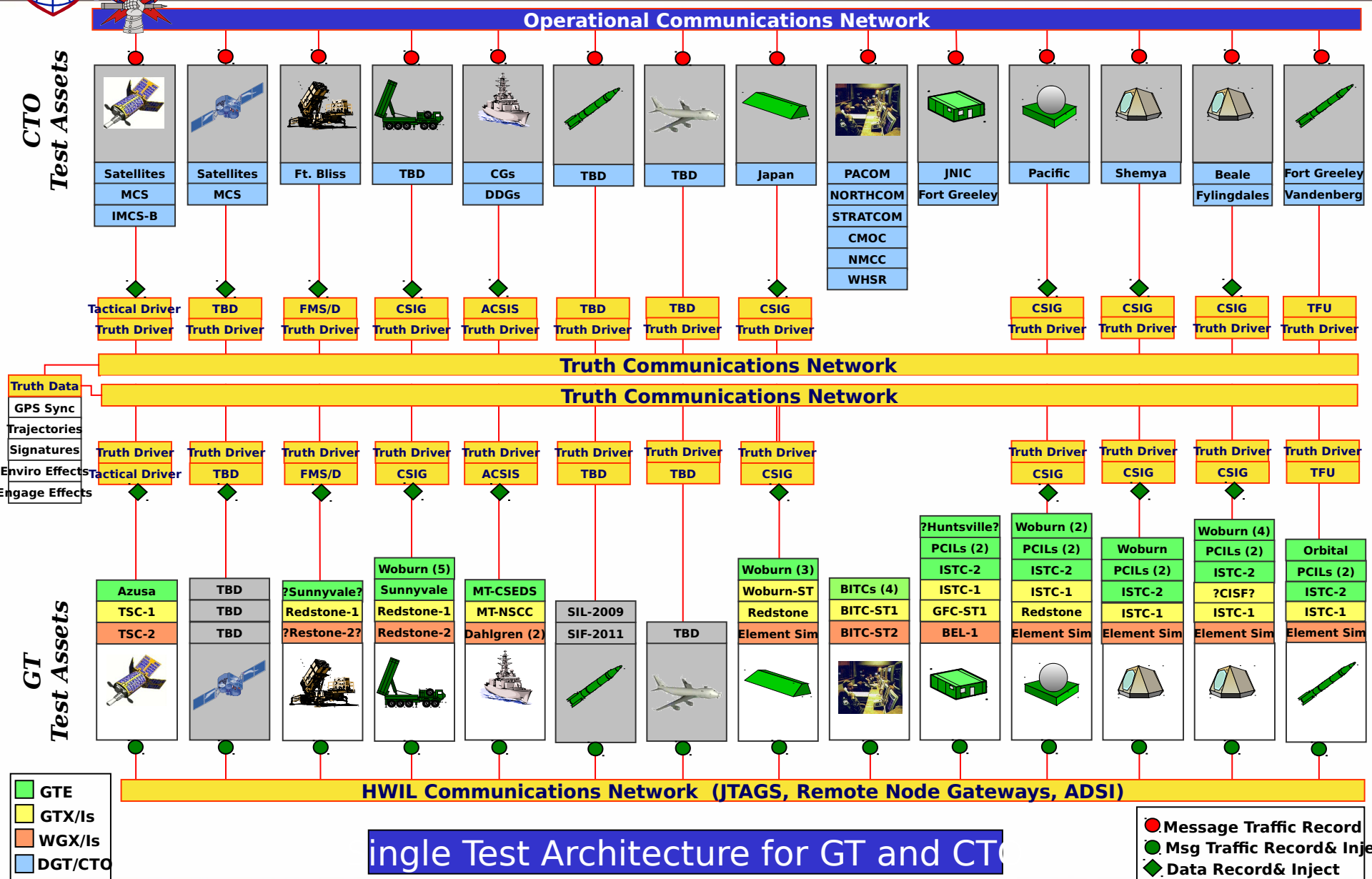


**Truth
Communication
Network**

Single Test Architecture for CTO and GT



CTO and GT Architecture Vision





Local Facilities

Advanced Research Center (ARC)



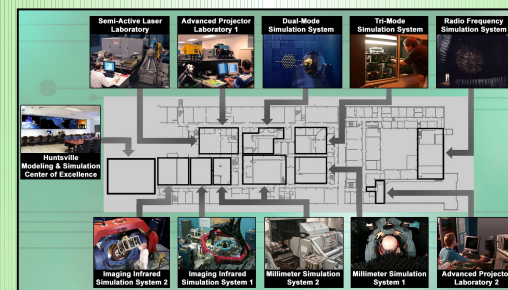
MDSE Test & Development

Simulation Center (SC)



Real time Data Analysis

MRDEC HWIL



Hardware Build & Checkout



DISTRIBUTION A - Approved for public release; distribution unlimited.

Simulation Center (SC)





DISTRIBUTION A - Approved for public release; distribution unlimited.

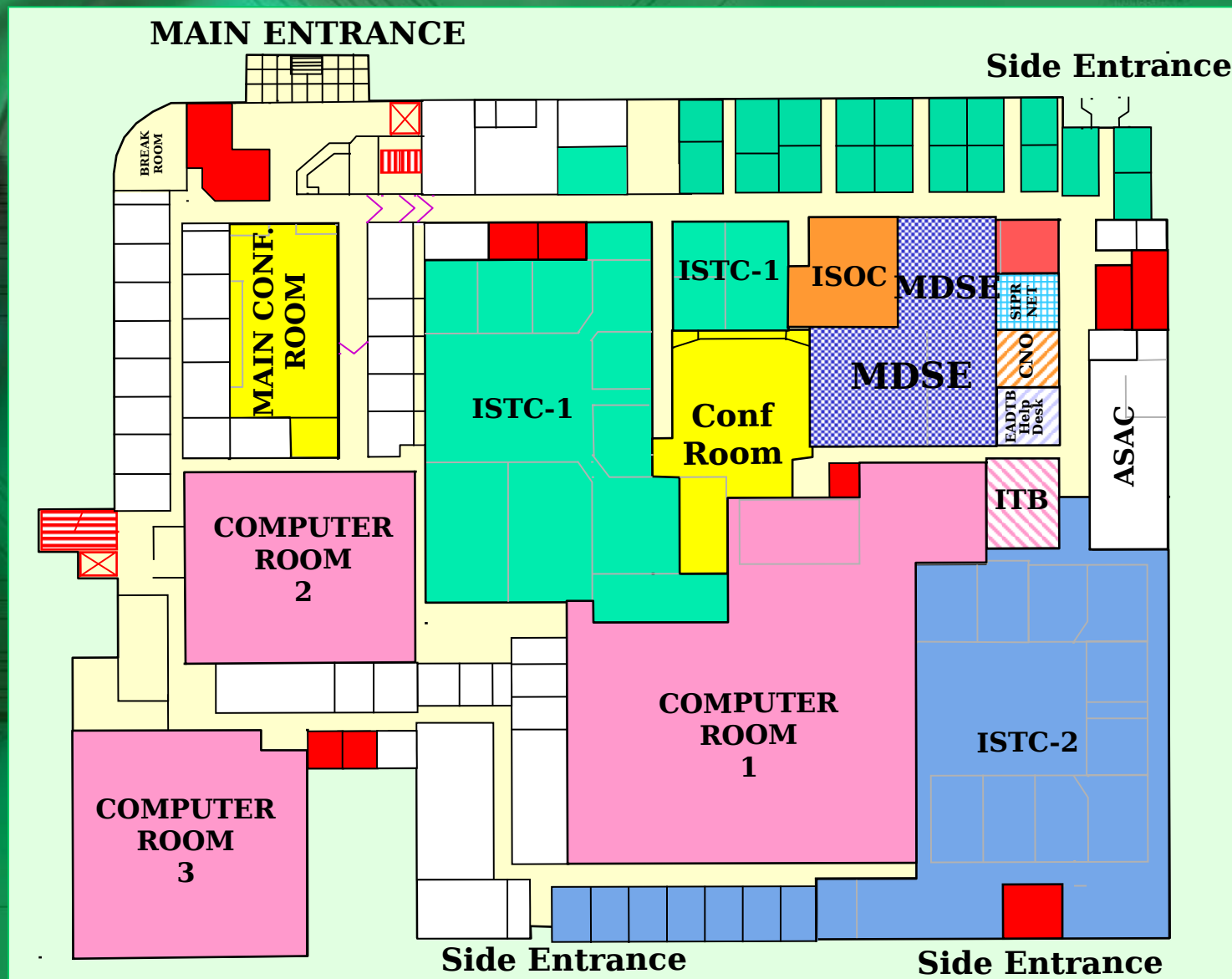
Advanced Research Center (ARC)



DISTRIBUTION A - Approved for public release; distribution unlimited.

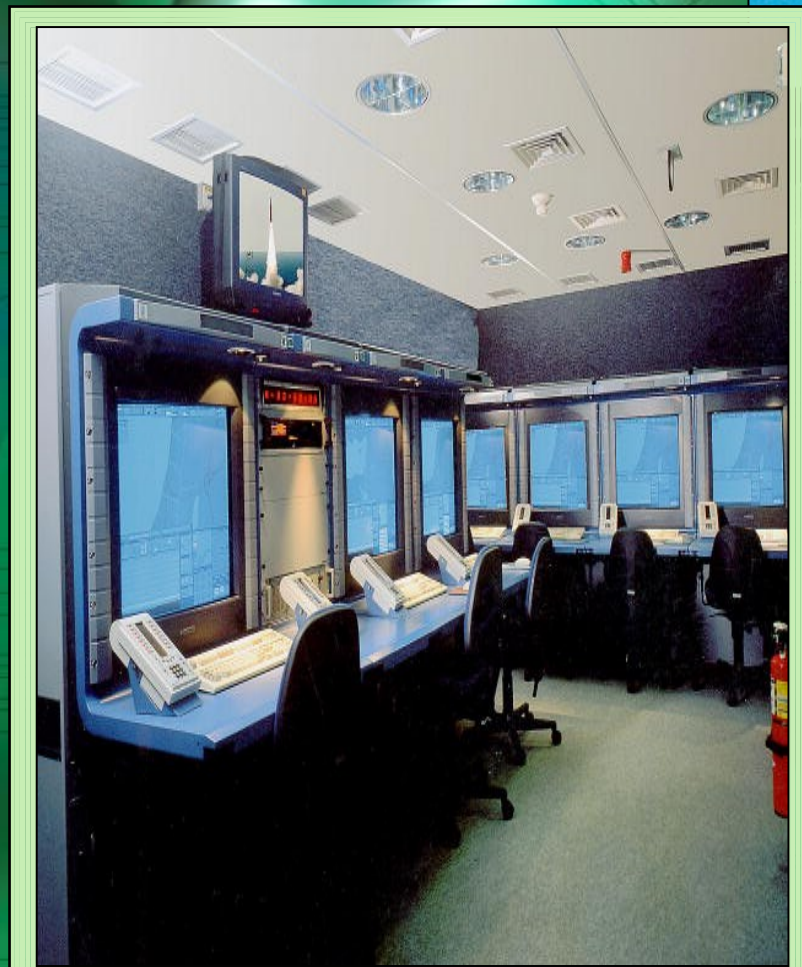


Location of TECs in the ARC



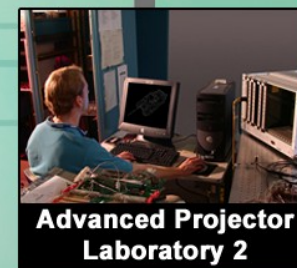
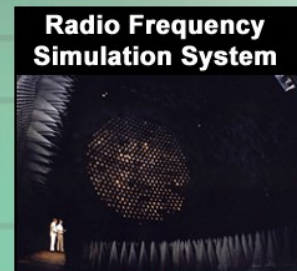
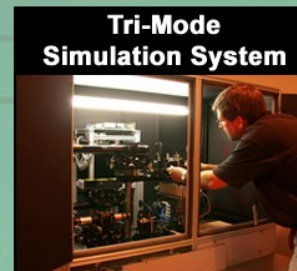
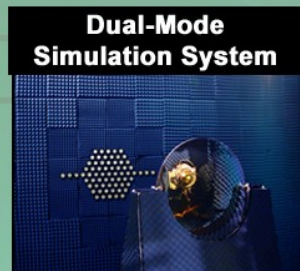


Joint National Integration Center (JNIC)





MRDEC HWIL



0.00
0.00
0.00
0.00



HWIL Lab Woburn, MA





What We Need

- Derive specific ITAC Requirements from Customer Event Definitions subject to U.S. Government approval
- Purchase required Enabling Hardware, Software, Network, or any other material items.
- Integrate Geographically Distributed Assets / Laboratories into Acceptable Test and Analysis Event Configurations.
- Perform Functional and Qualification Testing
- Arrange for Data Collection, Storage, Processing, and Delivery
- Verification and Validation
- Configuration Management

Questions

- <http://www.smdc.army.mil/>
- <http://www.smdc.army.mil/Contracts/Contracts.html>

***From Research to
Reality - Relevant &***

Ready